





**Application No:** 

GB 0003971.9

Claims searched: 1-4

Examiner:

Pete Beddoe

Date of search:

16 November 2000

# Patents Act 1977 Search Report under Section 17

## Databases searched:

UK Patent Office collections, including GB, EP, WO & US patent specifications, in:

UK Cl (Ed.R): C7B (BDCA, BDCC, BDCF, BDCJ, BDCK, BDCN, BDDA, BDDA,

BDDB, BDDC, BEDL)

Int Cl (Ed.7): C22B (21/00, 21/02, 21/04, 34/12); C25C (3/26, 3/28); C25F (1/12,

1/16)

Other: Online: WPI, EPODOC, JAPIO

## Documents considered to be relevant:

Category	Identity of document and relevant passage		
X,A	WO 99/64638 A1 (CAMBRIDGE UNIVERSITY) see esp exs & fig 1	1-4	
X	GB 781803 (HORIZONS) see esp exs	1-4	
A	Nature, Vol 407, 21 September 2000, G Z Chen et al, "Direct electrochemical reduction of titanium dioxide to titanium in molten calcium chloride", pages 361-364, see whole article		
X,A	Journal of Alloys and Compounds, Vol 237, 15 April 1996, D R Sadoway et al, "Electrochemical deoxidation of ytrrium-oxygen solid solutions, pages 150-154, see esp "experimental" section		
X,A	Metallurgical Transactions B, Vol 24B, June 1993, T H Okabe et al, Electrochemical Deoxidation of Titanium, pages 449-455, see esp "Experimental" and "Results" sections		
X,A	Acta Chemica Scandinavica, Vol 45, 1991, S Boghosan et al, "Oxide Complexes in Alkaali-Alkaline-Earth Chloride Melts, pages 145-157, see esp p146 lines 21-34 (LHS) & p150 et seq	1-4	

- X Document indicating lack of novelty or inventive step
   Y Document indicating lack of inventive step if combined
- with one or more other documents of same category.
- & Member of the same patent family
- A Document indicating technological background and/or state of the art.
  P Document published on or after the declared priority date but before the filing date of this invention.
- E Patent document published on or after, but with priority date earlier than, the filing date of this application.







Application No:

GB 0003971.9

Claims searched: 5-8

Examiner:

Pete Beddoe

Date of search:

17 May 2001

# Patents Act 1977 Further Search Report under Section 17

#### Databases searched:

UK Patent Office collections, including GB, EP, WO & US patent specifications, in:

UK Cl (Ed.S): C7B (BCBX, BDCA, BDCC, BDCF, BDCJ, BDCK, BDCN, BDDA

BDDB, BDDC, BEDL)

Int Cl (Ed.7): C22B (21/00, 21/02, 21/04); C25C (3/00, 3/26, 3/28, 5/00, 5/02, 5/04);

C25F (1/12, 1/16)

Other: Online: WPI, EPODOC, JAPIO

### Documents considered to be relevant:

Category	Identity of document and relevant passage		Relevant to claims
x	GB 781803	(HORIZONS) see esp ex II	5 at least
х	WO 99/64638 A1	(CAMBRIDGE UNIVERSITY) see esp p13 lines 15-22	5 at least
Х	WO 98/49371 A1	(ALTA) see esp p9 line 30 - p10 line 12 & p10 line 25 - p11 line 9	5 at least
х	US 4187155	(DIAMOND) see esp exs 1,2,3	5 at least
Α	Nature, Vol 407, 21 September 2000, G Z Chen et al, "Direct electrochemical reduction of titanium dioxide to titanium in molten calcium chloride", pages 361-364, see whole article and esp 2 <sup>nd</sup> para of "Methods" section at page 363		

& Member of the same patent family

E Patent document published on or after, but with priority date earlier than, the filing date of this application.

X Document indicating tack of novelty or inventive step
 Y Document indicating tack of inventive step if combined with one or more other documents of same category.

A Document indicating technological background and/or state of the art.
 P Document published on or after the declared priority date but before the filing date of this invention.